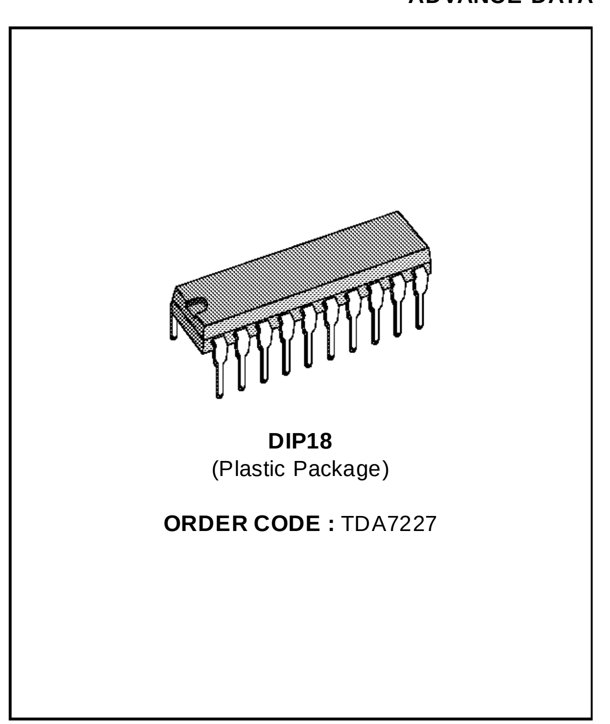


TDA7227

SINGLE-CHIP AM/FM RADIO WITH FRONT-END

ADVANCE DATA

- BUILT-IN FM F/E AND AM/FM IF
- AM DETECTOR COIL AND IF COUPLING CAPACITOR ARE NOT NECESSARY
- WIDE OPERATING VOLTAGE RANGE (1.8 - 7V)
- LED DRIVE CIRCUIT FOR TUNING INDICATOR



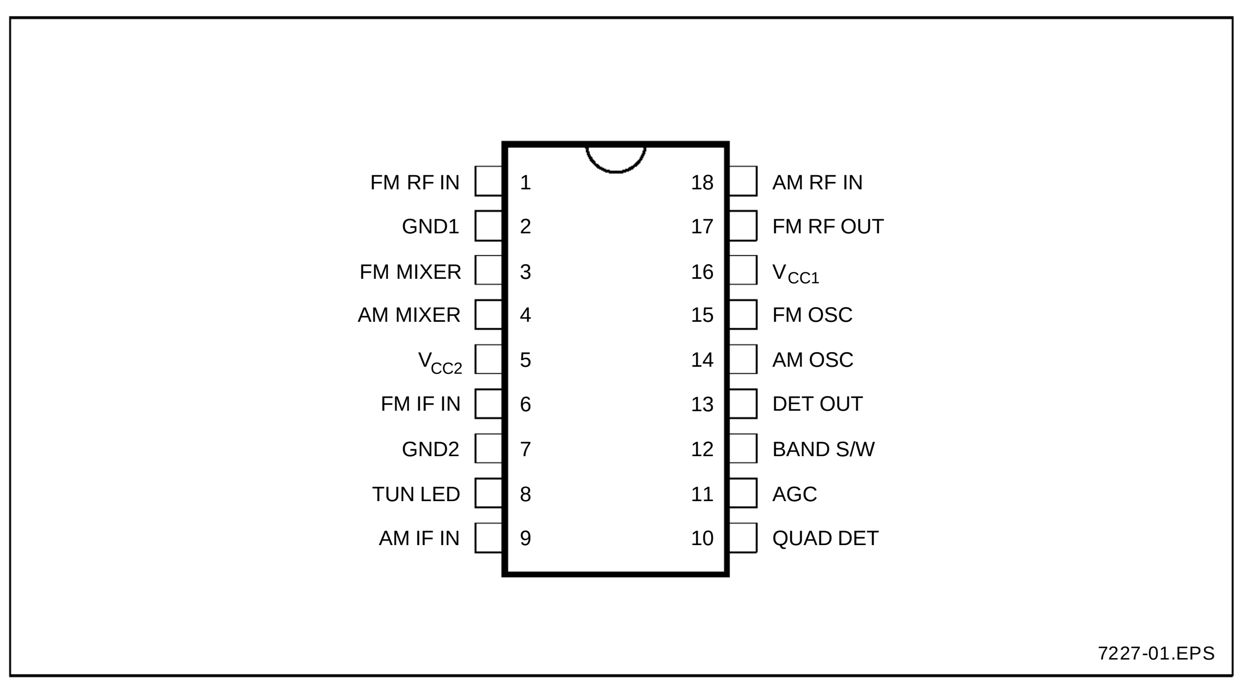
DIP18
(Plastic Package)

ORDER CODE : TDA7227

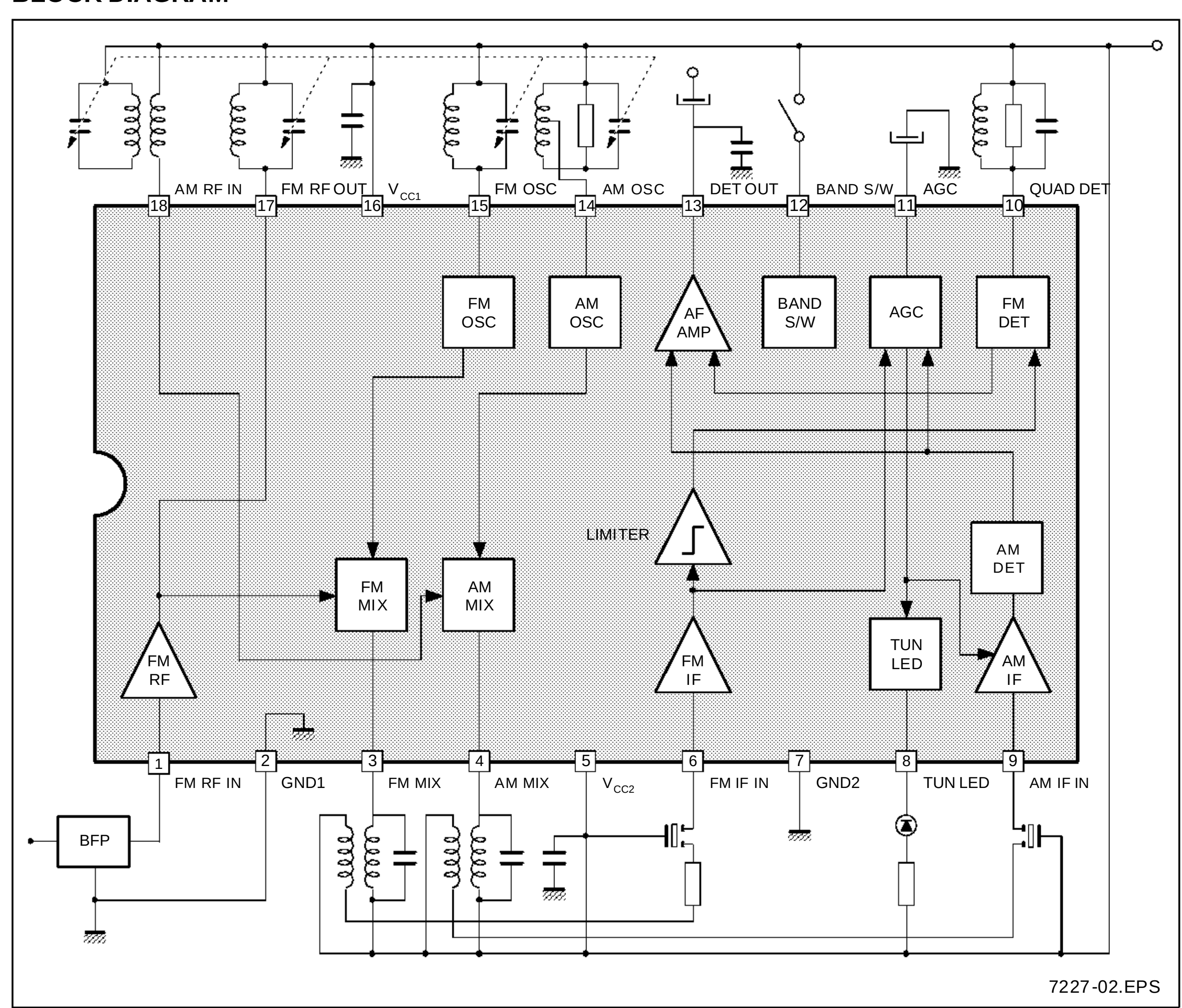
DESCRIPTION

TDA7227 is a mono AM/FM one chip tuner ICs which is designed for portable radios, clock radios and radio cassette recorders.

PIN CONNECTIONS



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_S	Supply Voltage	9	V
I_{LED}	LED Current	10	mA
V_{LED}	Led Voltage	10	V
T_{oper}	Operating Temperature	- 25 to 75	^oC
T_{stg}	Storage Temperature	-55 to 150	^oC

7227-01.TBL

RECOMMENDED OPERATING CONDITION AT $T_A = 25^oC$

Symbol	Parameter	Value	Unit
V_S	Supply Voltage	1.8 to 7	V
T_{oper}	Operating Temperature	- 20 to 60	^oC

7227-02.TBL

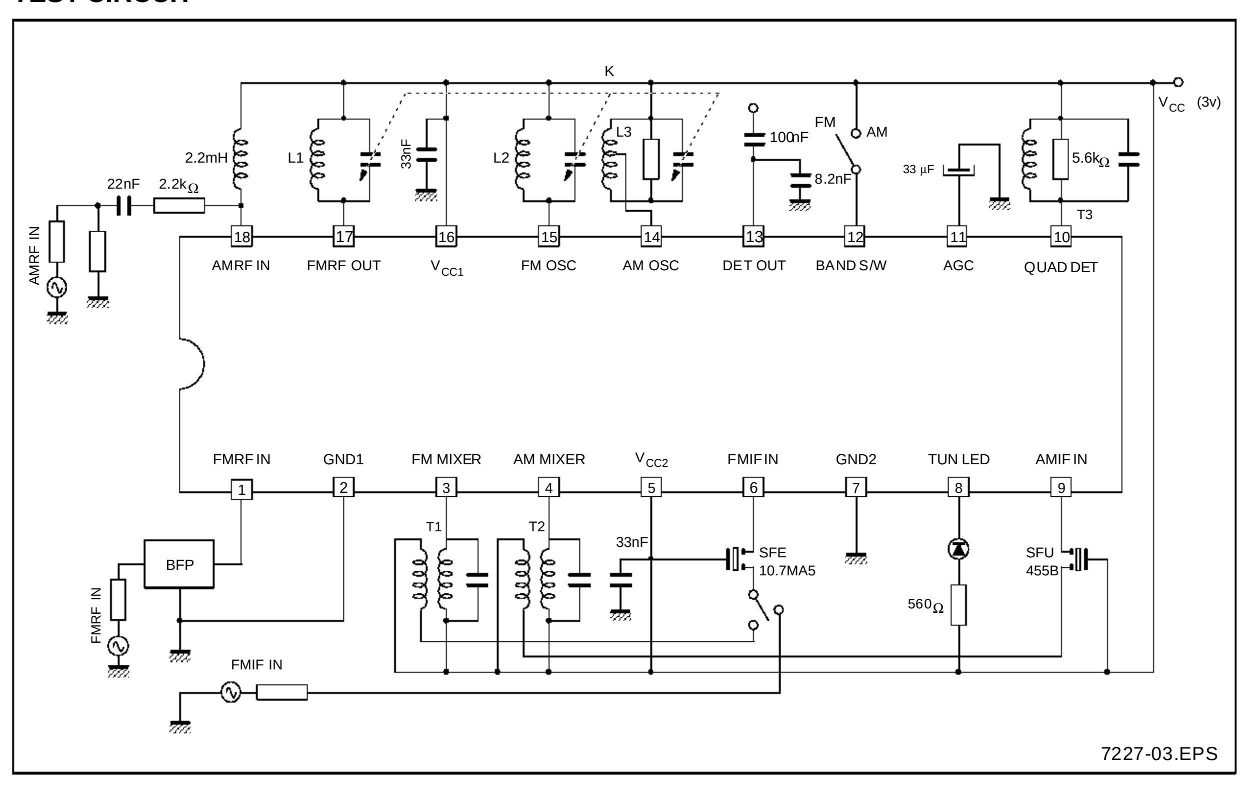
ELECTRICAL CHARACTERISTICS

$T_A = 25^oC$, $V_{CC} = 3V$ F/E : f = 100MHz, f_m = 1kHz
FM IF : f = 10.7MHz, f = + 22.5kHz, f_m = 1kHz
AM : f = 1MHz, m = 30%, f_m = 1kHz

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_S	Supply Voltage		1.8	3	7	V
I_{CC}	Supply Current	V_{IN} = 0, FM mode V_{IN} = 0, AM mode		9 7		mA mA
V_{IN} (lim)	FM F/E Input Limiting Voltage	- 3dB limiting		10		dBμ
FM SECTION						
V_{IN} (lim)	Input Limiting Voltage	- 3dB limiting		44		dBμ
V_O	Recovered Output Voltage	V_{IN} = 80dBμ		80		mV
S/N	Signal to Noise Ratio	V_{IN} = 80dBμ		70		dB
THD	Total Harmonic Distorsion	V_{IN} = 80dBμ		0.4		%
AMR	AM Rejection Ratio	V_{IN} = 80dBμ		50		dB
AM SECTION						
G_V	Gain	V_{IN} = 26dBμ		40		mV
V_O	Recovered Output Voltage	V_{IN} = 60dBμ		60		mV
S/N	Signal to Noise Ratio	V_{IN} = 60dBμ		44		dB
THD	Total Harmonic Distorsion	V_{IN} = 60dBμ		1.0		%
R_O	Pin 12 Output Resistance	FM mode AM mode		5 5		kΩ kΩ

7227-03.TBL

TEST CIRCUIT

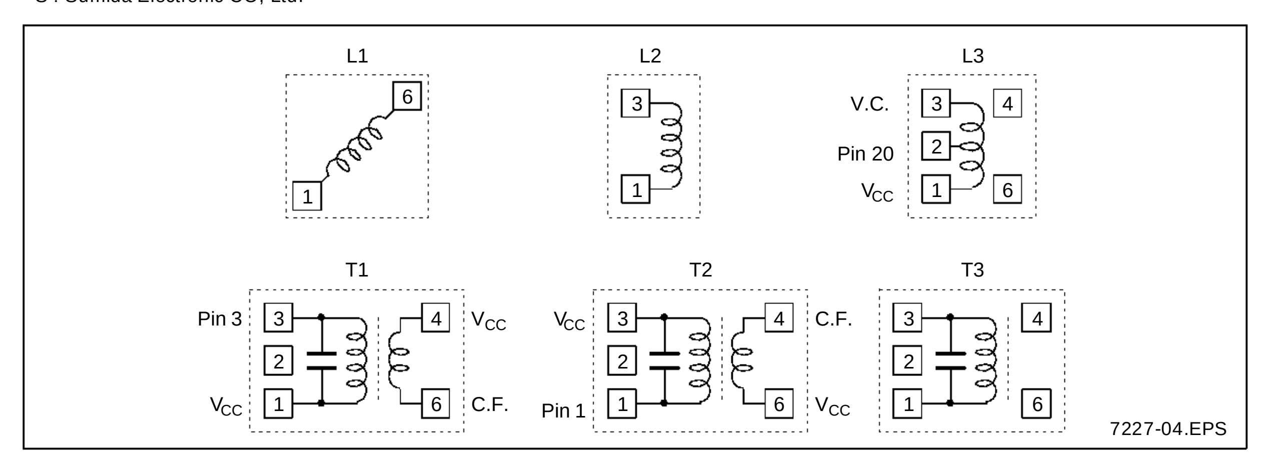


COIL DATA

Coil N°	f (Hz)	L (µH)	C_O (pF)	Q_O	Turns 1 - 2	Turns 2 - 3	Turns 1 - 3	Turns 1 - 4	Turns 1 - 6	Wire (mm∅)	Ref. *
L1 FM RF	100M			100				$2\frac{1}{2}$		0.5 UEW	
L2 FM OSC	100M			100			$2\frac{3}{4}$			0.5 UEW	
L3 AM OSC	796k	288		115	13	73				0.08 UEW	S - 4147 - 1356 - 045
T1 FM MIX	10.7M		75	115			12		1	0.12 UEW	S - 0133 - 309 - 045
T2 AM MIX	455k		180	120			180		15	0.08 UEW	S - 2150 - 2162 - 165
T3 FM DET	10.7M		47	165			16			0.09 UEW	S - 2153 - 4095 - 132

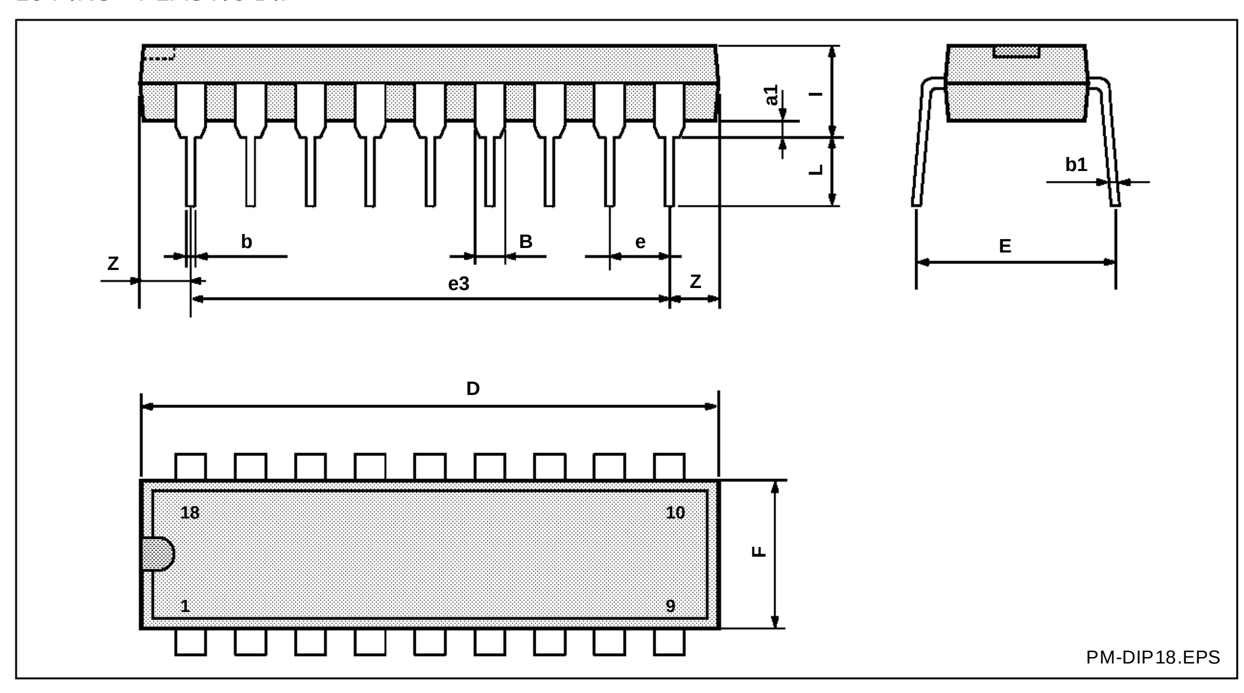
7227-04.TBL

* S : Sumida Electronic CO, Ltd.



PACKAGE MECHANICAL DATA

18 PINS - PLASTIC DIP



Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.254			0.010		
B	1.39		1.65	0.055		0.064
b		0.46			0.018	
b1		0.25			0.010	
D			23.24			0.914
E		8.5			0.335	
e		2.54			0.100	
e3		20.32			0.800	
F			7.1			0.280
i			3.93			0.155
L		3.3			0.130	
Z		1.27	1.59		0.050	0.062

DIP18.TBL

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - China - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco
The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - United Kingdom - U.S.A.

ORDER CODE :